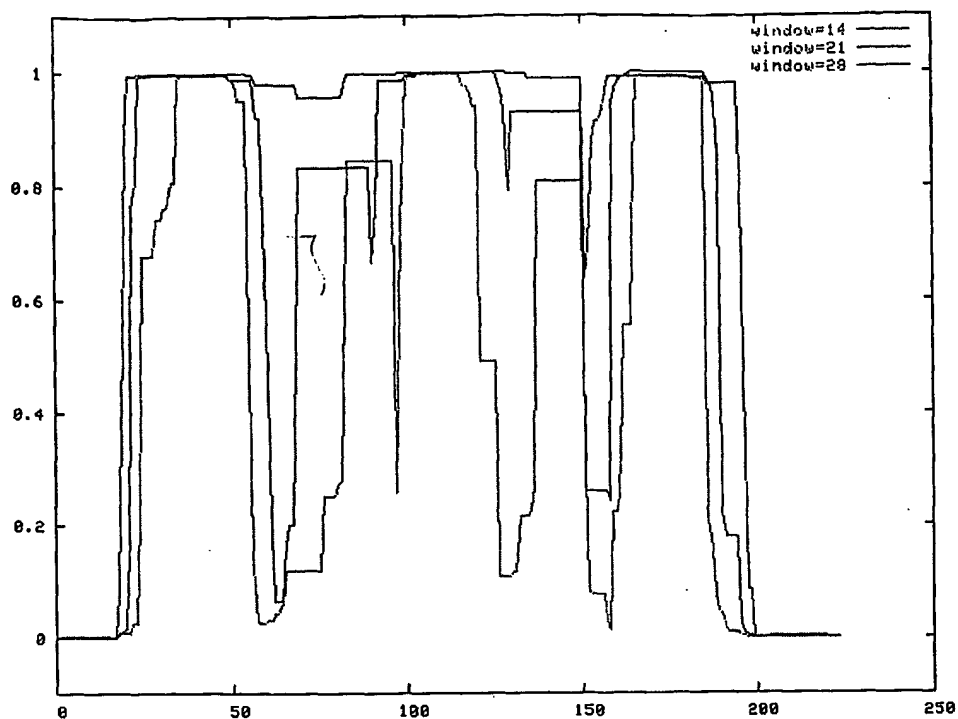
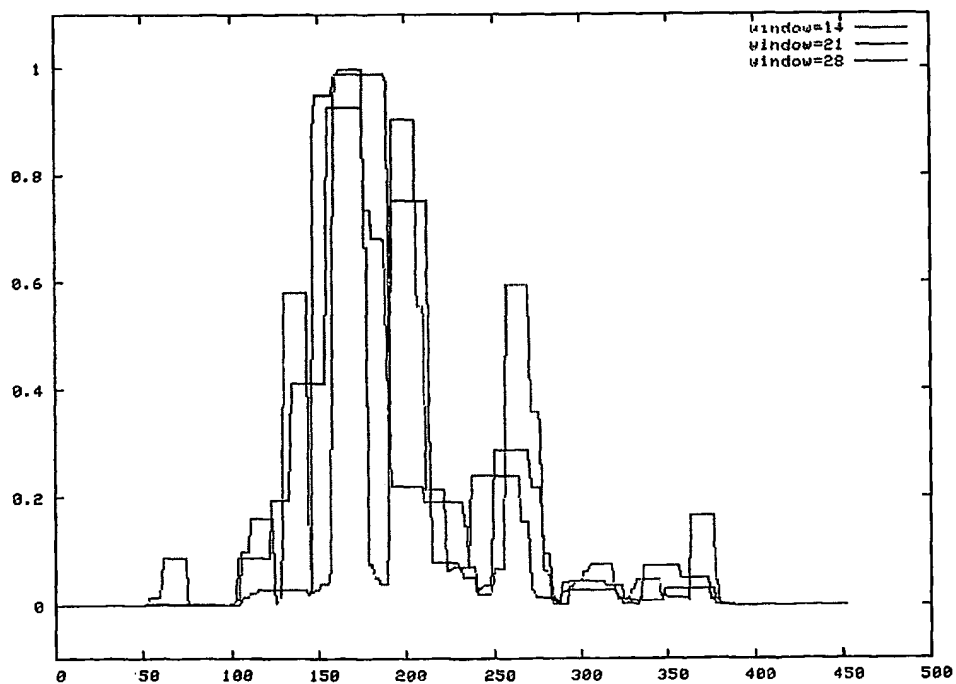
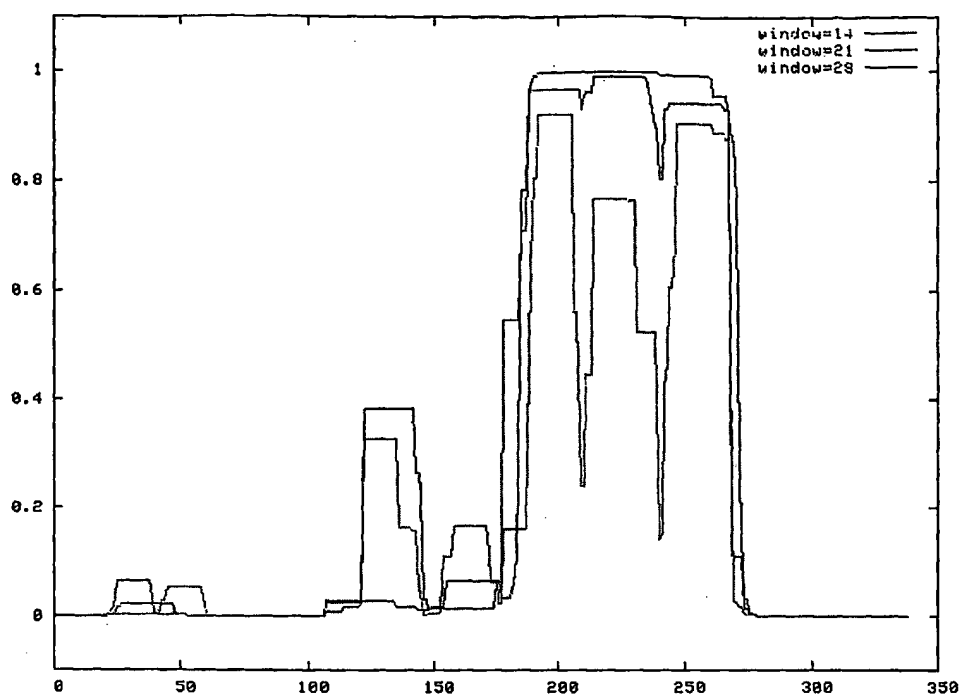
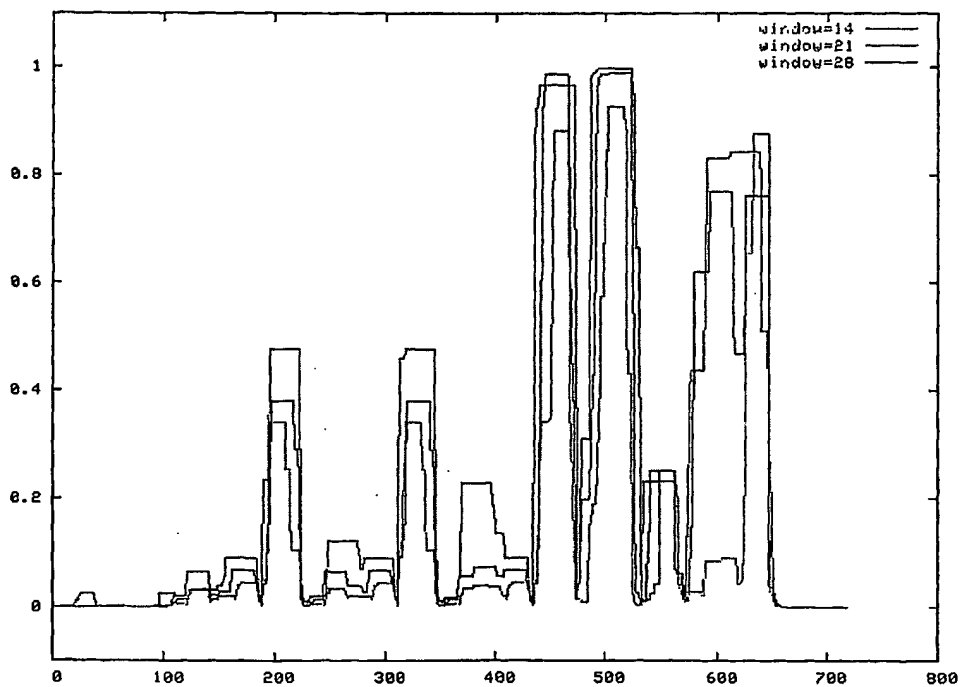


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**FIGURE 1****FIGURE 2**

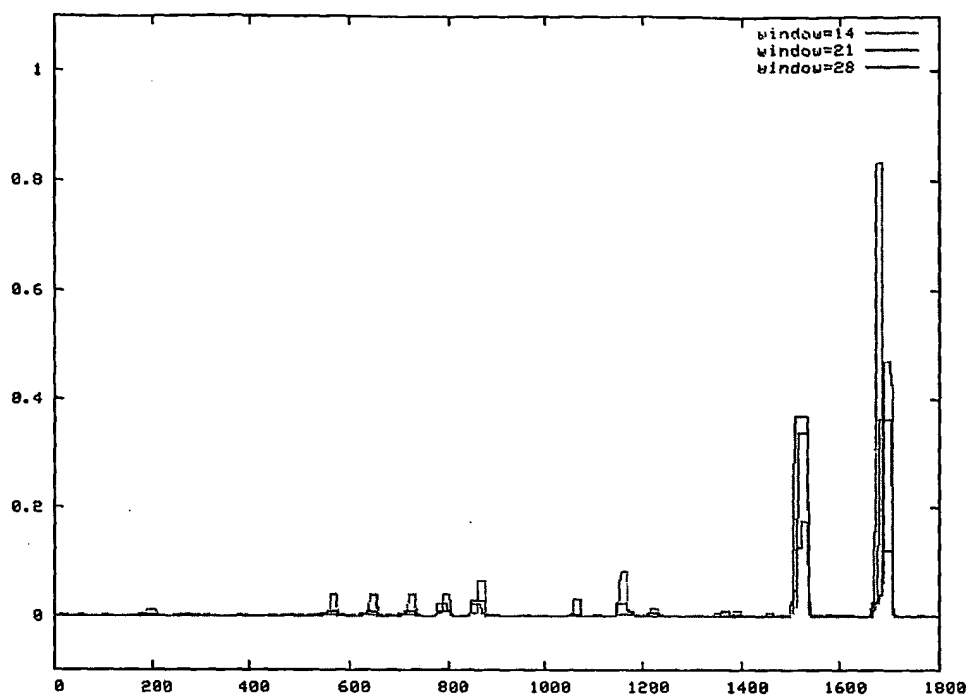
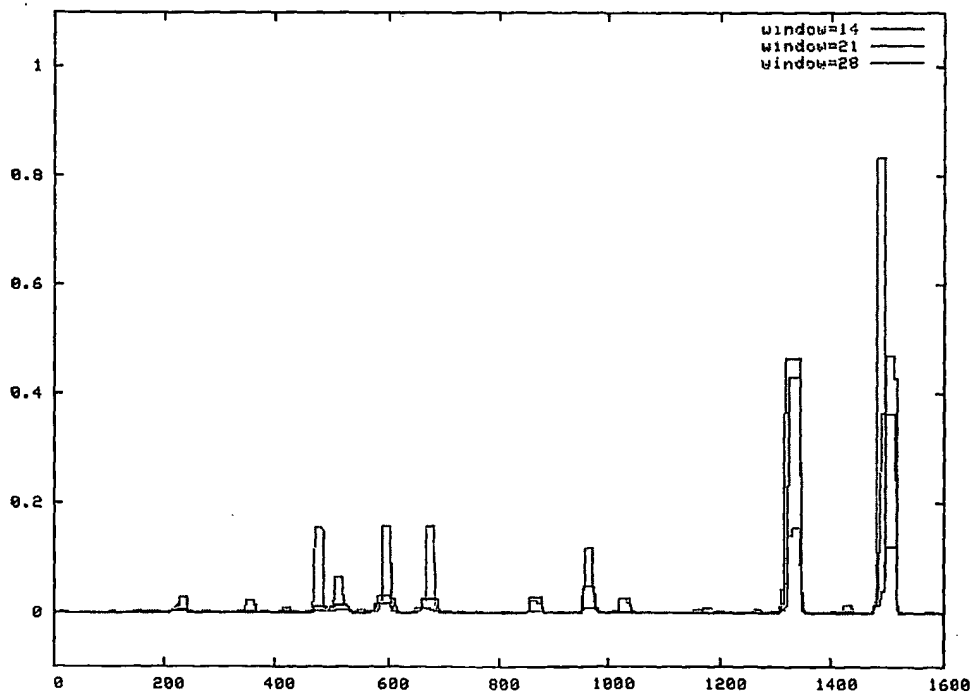
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**FIGURE 3****FIGURE 4**

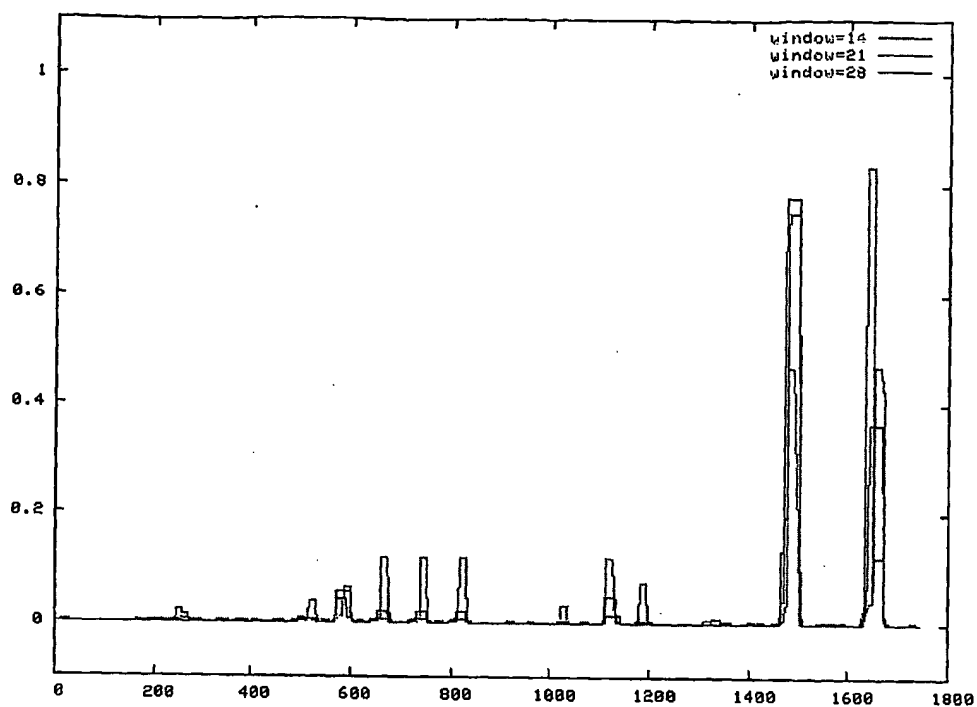
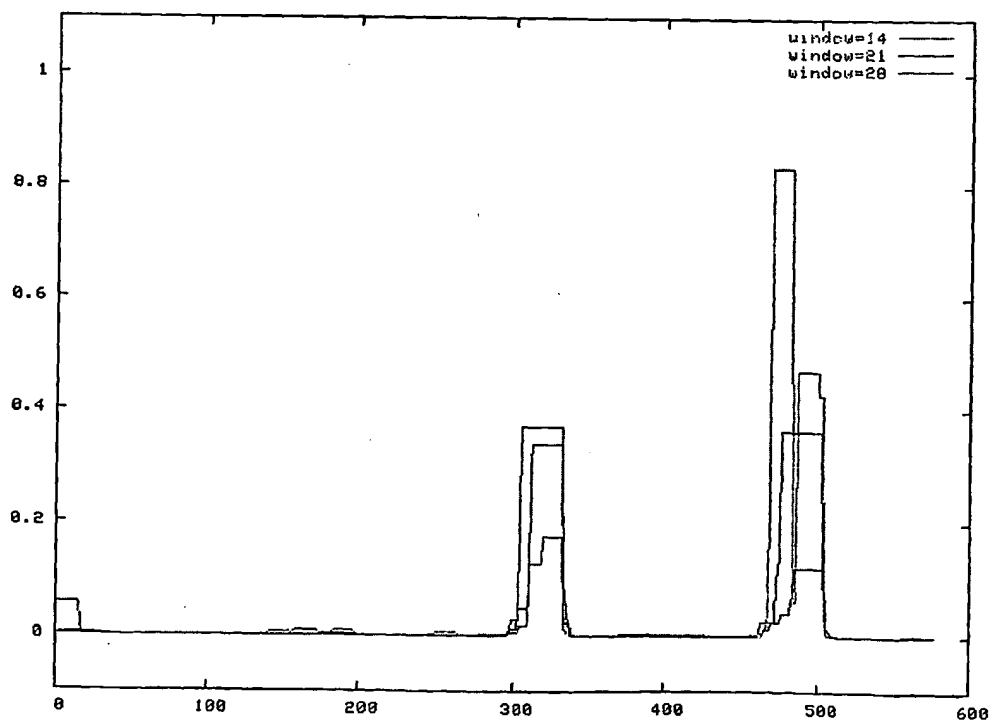
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**FIGURE 5****FIGURE 6**

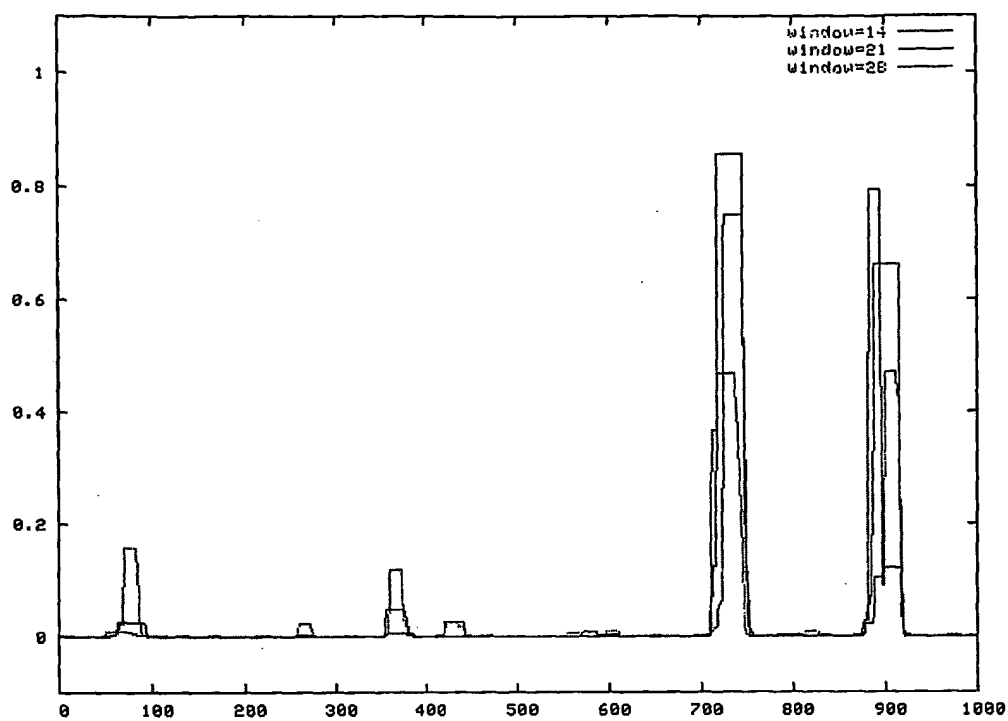
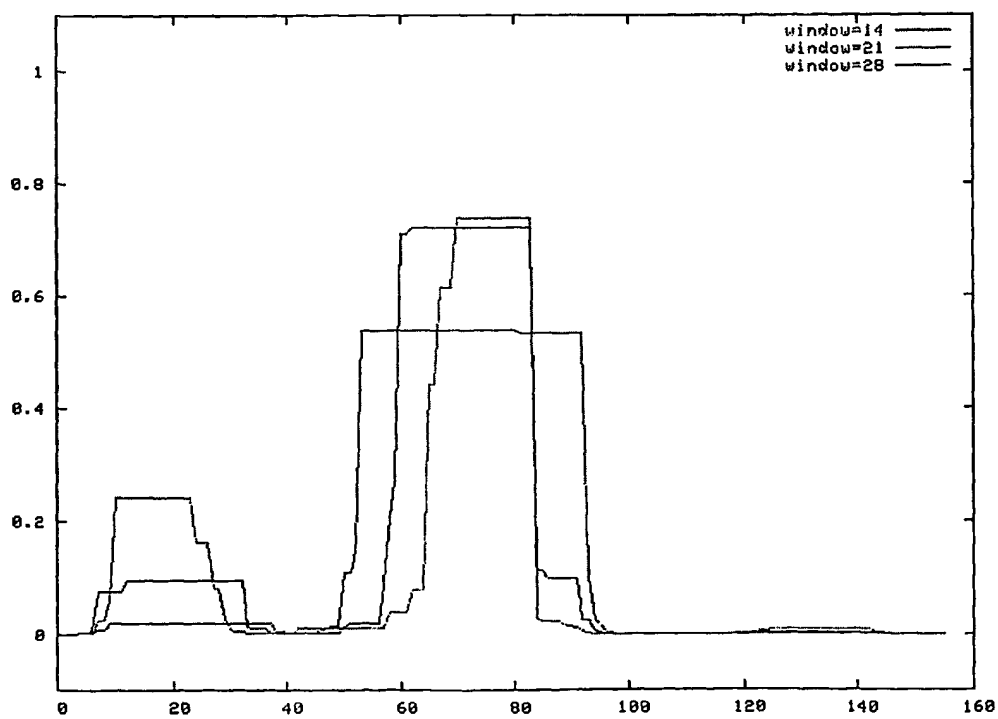
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**FIGURE 7****FIGURE 8**

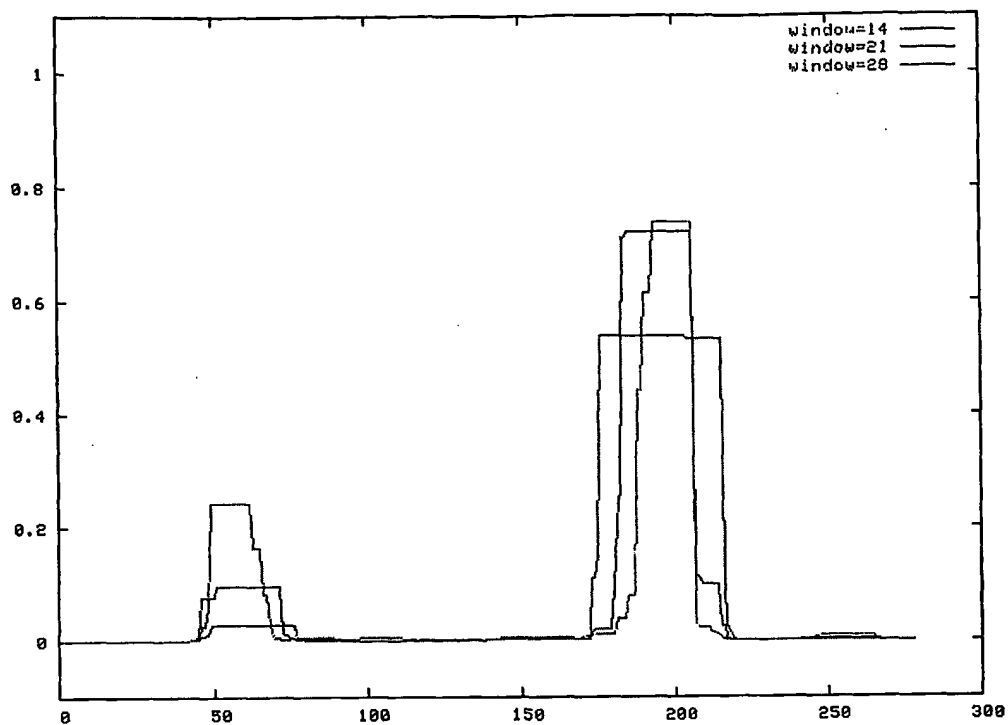
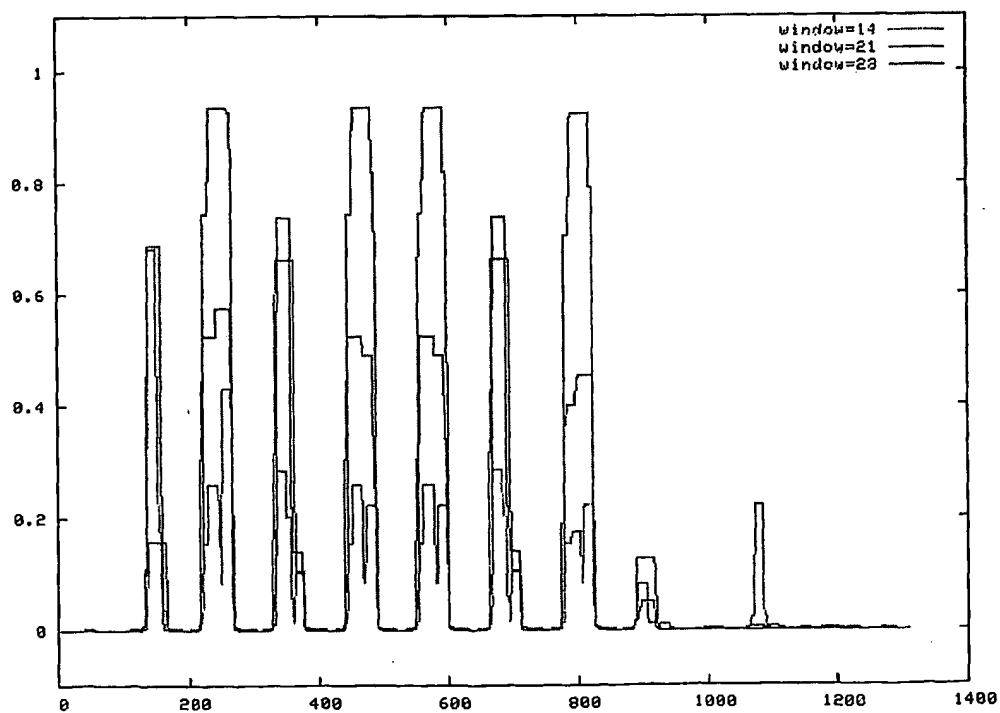
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**FIGURE 9****FIGURE 10**

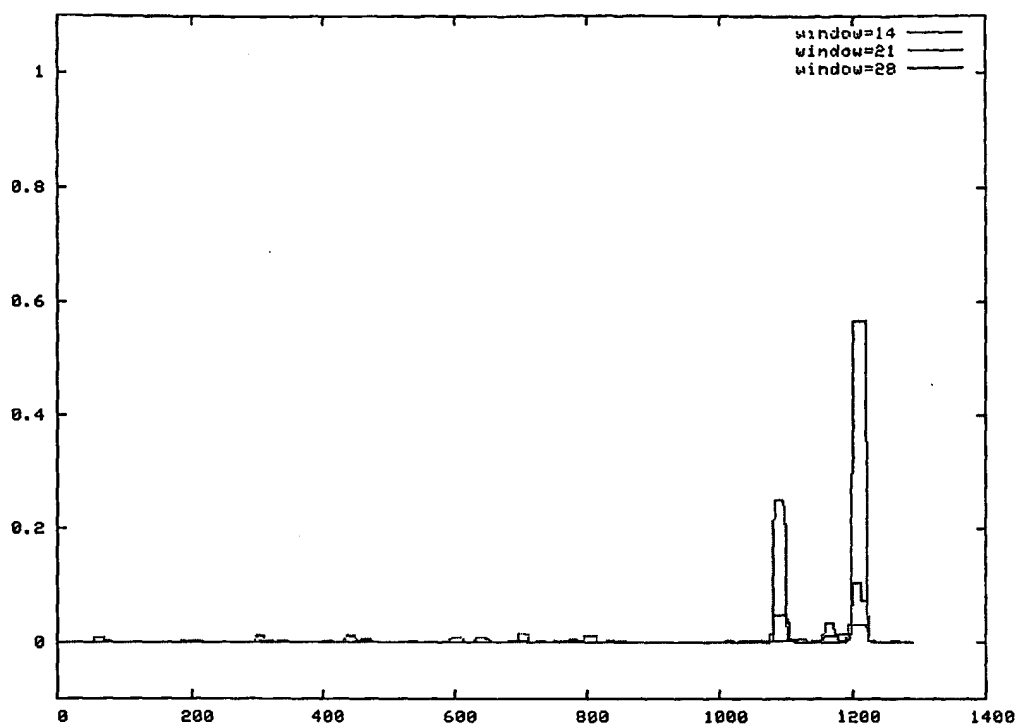
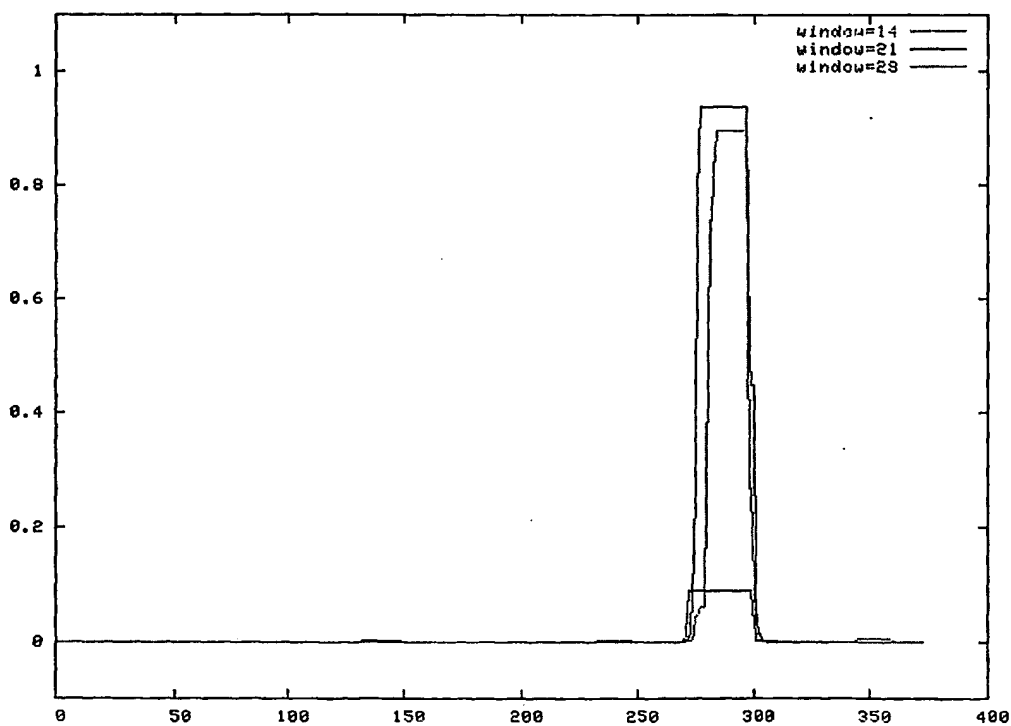
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**FIGURE 11****FIGURE 12**

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**FIGURE 13****FIGURE 14**

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FIGURE 15

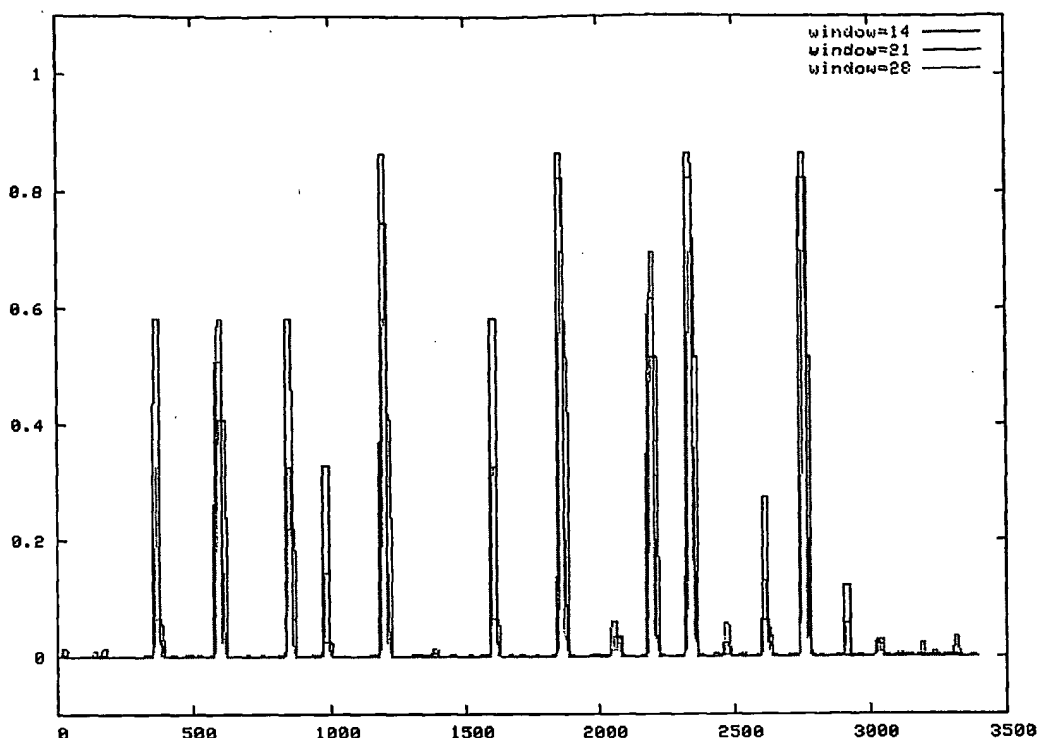
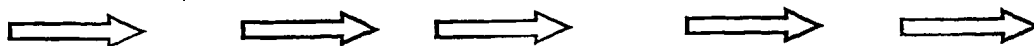


FIGURE 16

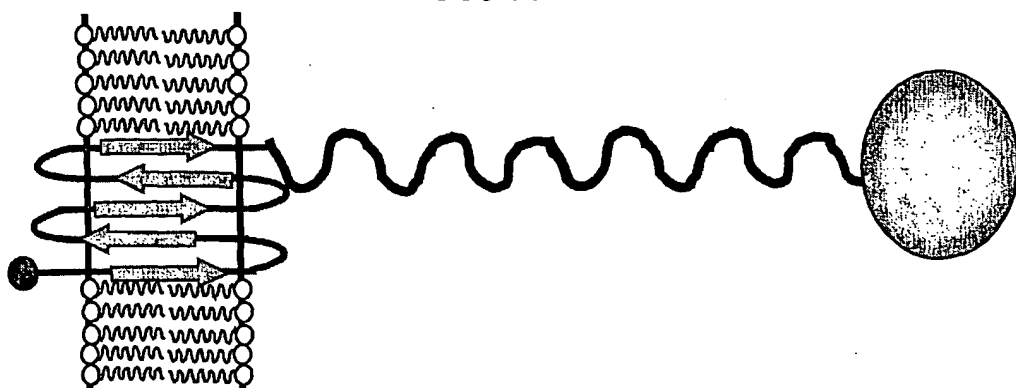
ECK1	ACTASAIPIASQPQVKTGDMVMVSAGAGTENGESEVSVGTS--FNAGHTHTVLKAGISADTQSDFGAGVGVGYSE-
EHEC	ACTASAIPIASQPQVKTGDMVMVSAGAGTENGESEVSVGTS--FNAGHTHTVLKAGISADTQSDFGAGVGVGYSE-
EPEC	ACTASAIPIASQPQVKTGDMVMVSAGAGTENGESEVSVGTS--FNAGHTHTVLKAGISADTQSDFGAGVGVGYSE-
EAEC	ACTASAIPIASQPQVKAGDEMMSAGAGTENGESEVSVGTS--FNAGHTHTVLKAGISADTQSDFGAGVGVGYSE-
HAESO	ACTASAVAGMLPQSTAPGKSLVSLGVGHHREQSETAIGVSS-MSSNGKWVVKGGMSYDTRHATFGGSSVGFFEN
RALSO	SCIAAATATLMLPDVDQGKSTATIGESATYKGYQAVAGASA-RISHN-LKAKMGVGYSSG-GTTVGMGASYQW
BURFO	ACTAAATATLMLPDVDQGKSTATIGESATYKGYQAVAGASA-RITON-LKAKAGAGTSSQ-GTTVGLGASYQW
SAA	ACTAGAMMTALPMID-GKQYSFGMAASNYRDEQIAAGIIE-RTSEN-TVVRINTSWDTQHGTVATGMSIGW
UPEC	GGIASAMAMTIGLPQAYTPCASMASIEGGETYNGESAVALGVSM-VSANGRWVYKLGSTNSQGEYSALGAGIQW
SHIFL	GGIASAMAMTIGLPQAYTPCASMASIEGGETYNGESAVALGVSM-VSANGRWVYKLGSTNSQGEYSALGAGIQW
NADA	QSHPEQAALSGLFQPYNVGRFNVTAVGGYKSESAVAIGTGRFTENFAAKAGVAVGTSSGSSAAHVGVNYEW
HADA	RELAAQAALNGLFQPYNVGKLNLTAVGGYKSTAVAVGTGRFTENFAAKAGVAVGTSSGSSAAHVGVNYEW
ACTAC	NELASQAALSGLFQPYNVGSLNLSAAVGGYKSKTBLAVESGYRFNQNVAAKAGVAVGTNGGS-ATYNVGLNFEW
EIBC	RAAAQSAALIGLFQPYSVGRFNATAVGGYSDQQALAVGVGYRFNEQTAAKAGVAFSD-GD--ASWNVGVNFEF
EIBD	RAAAQSAALIGLFQPYSVGRFNATAVGGYSDQQALAVGVGYRFNEQTAAKAGVAFSD-GD--ASWNVGVNFEF
EIBF	RAAAQSAALIGLFQPYSVGRFNATAVGGYSDQQALAVGVGYRFNEQTAAKAGVAFSD-GD--ASWNVGVNFEF
EIBA	RAAAQSAALIGLFQPYSVGRFNATAVGGYSDQQALAVGVGYRFNEQTAAKAGVAFSD-GD--ASWNVGVNFEF
EIBE	RAAAQSAALIGLFQPYSVGRFNATAVGGYSDQQALAVGVGYRFNEQTAAKAGVAFSD-GD--ASWNVGVNFEF
USPA2	NGMAQAALSGLFQPYSVGRFNATAVGGYSDQQALAVGVGYRFNEQTAAKAGVAFSD-GD--ASWNVGVNFEF
YADA	KELASSAALNSLFQPYGVGVNFTAGVGGYRSSQALIGSGYRVNENVALKAGVAYAGSSD--VMYNASFNIEW
DSRA	TELANQSAALSLVQPNGVGRITSVPAVGGYRDKTALAIGVGRITDRFTAKAGVAFNTYNGG-MSYGASVGYEF
BRUME	AGAAANAALSLRYDNRPGKVSIAATGCGEKGSTLAAGIGY-TSKNENARYNV-SVAYNEAGTSWAGASFTLN
BRUSU	AGAAANAALSLRYDNRPGKVSIAATGCGEKGSTLAAGIGY-TSKNENARYNV-SVAYNEAGTSWAGASFTLN
BRUME2	QAAAIGLAAASLRYDDRPGKISAAIGGGEFWRGEGAVAGLGLH-TSEDQRMRSNLS-AATSGGNWGMGAGFSYTEN
BRUSU2	QAAAIGLAAASLRYDDRPGKISAAIGGGEFWRGEGAVAGLGLH-TSEDQRMRSNLS-AATSGGNWGMGAGFSYTEN
SINME	QAAAIGLAAASLRFDPNGKLSVAGGGEFWRSEGLAFAGY-TSEDGRVRANLT-GAAGGNVGVGAGLSITLN
BRAJA	GGVALALAAASSLQFDRPGKISVSGGGEFENFQSGGLAVGLGY-SYSD-AMRENAFTAQAQGAIGVRAGASWTLN





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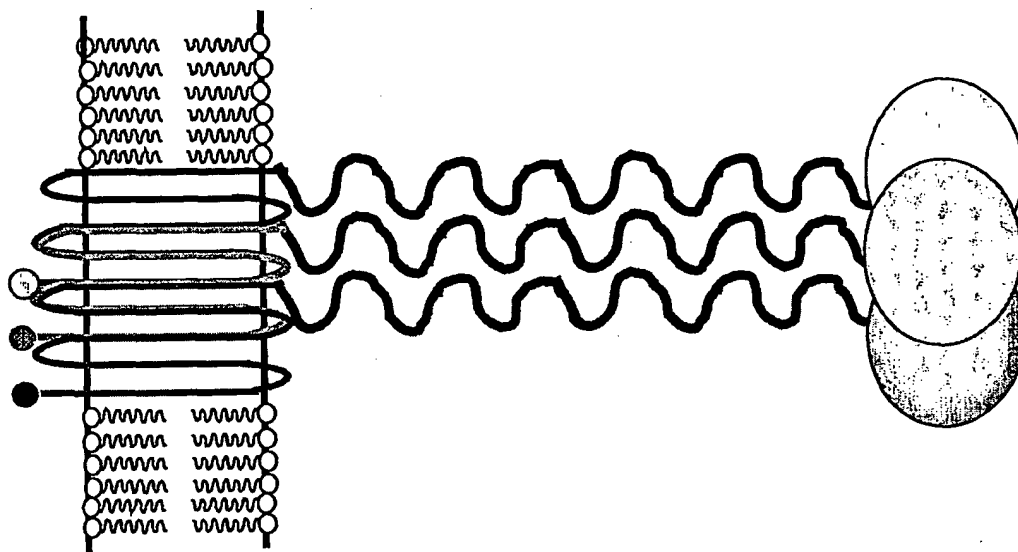
**FIGURE 17**



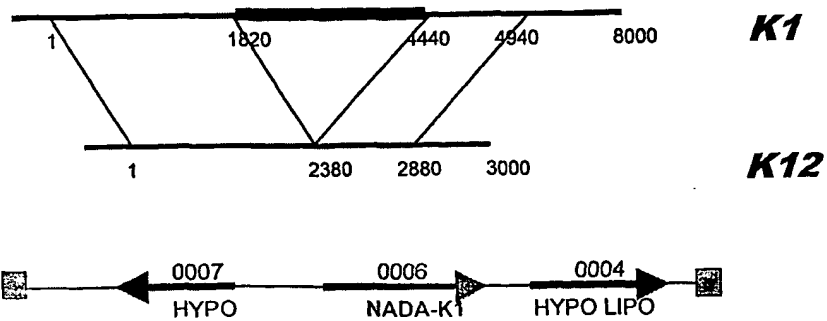
ANCHOR

STALK

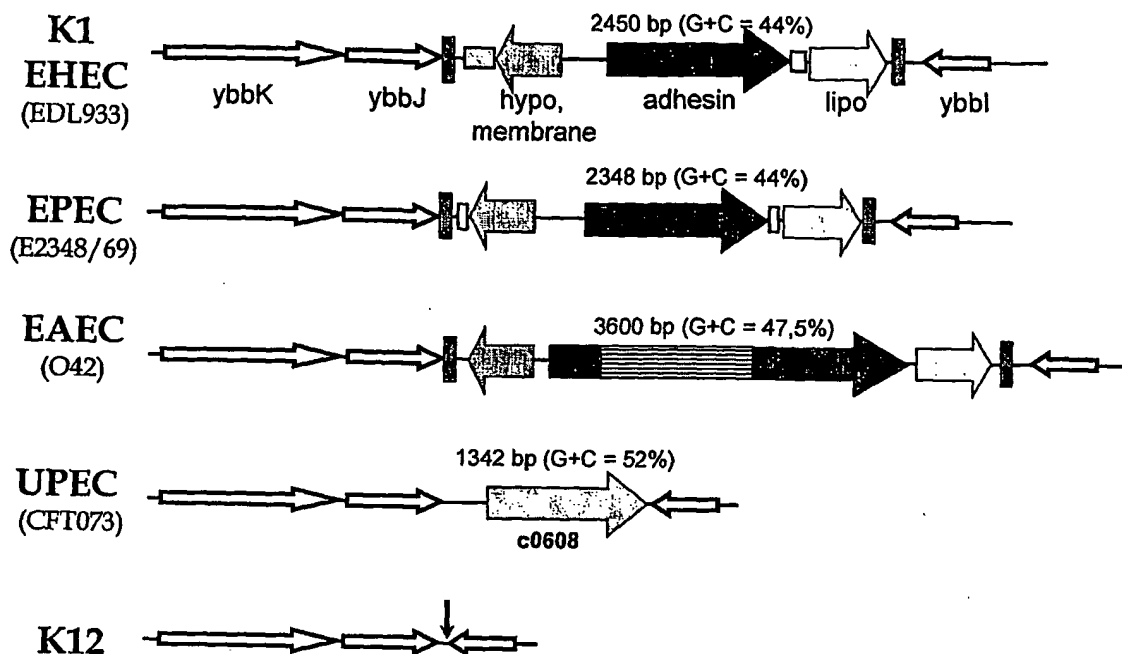
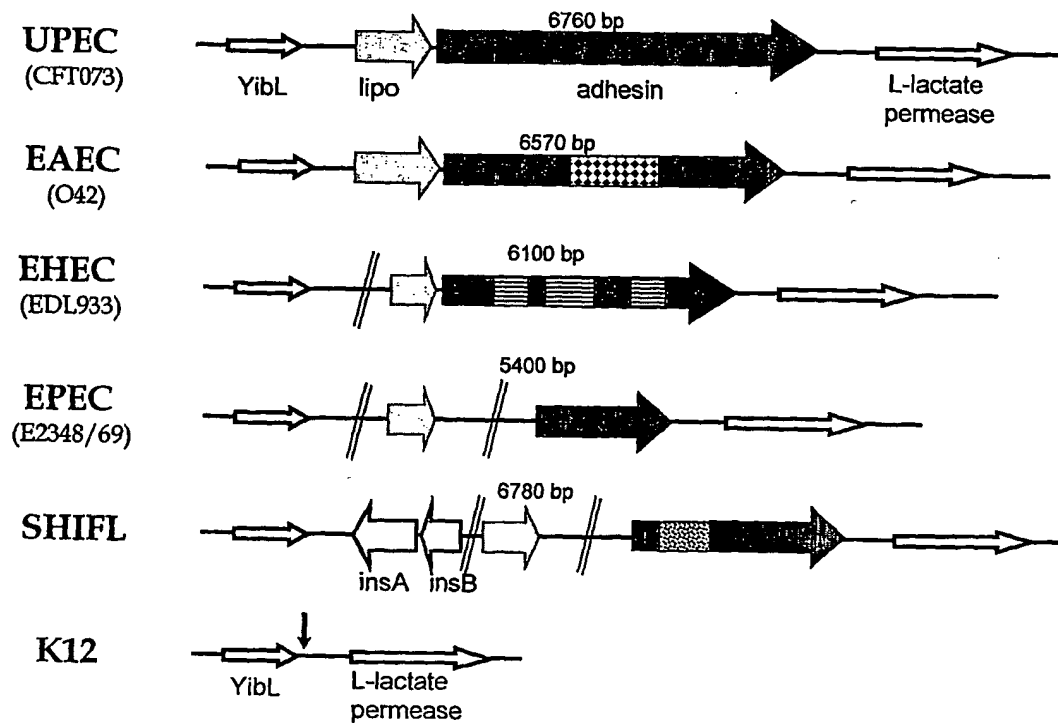
HEAD



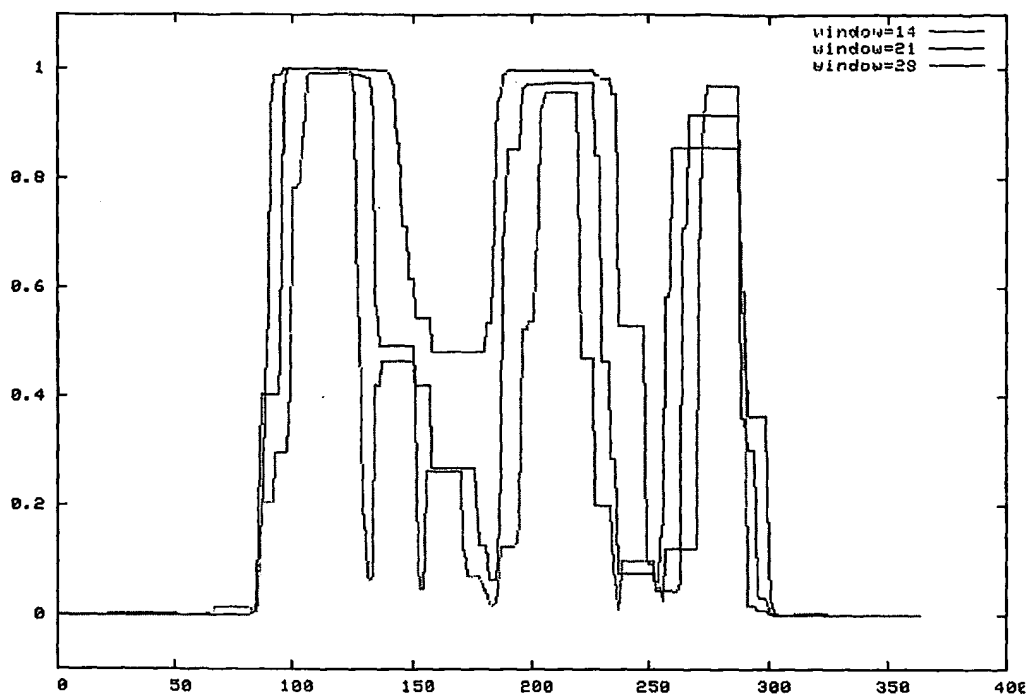
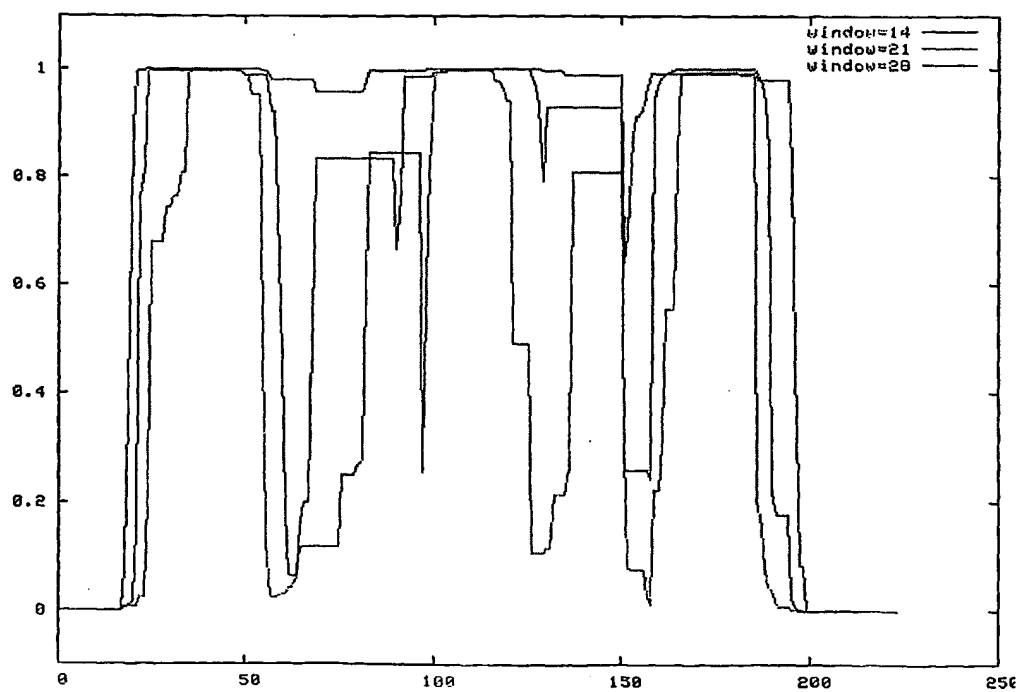
**FIGURE 20**



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**FIGURE 18****FIGURE 19**

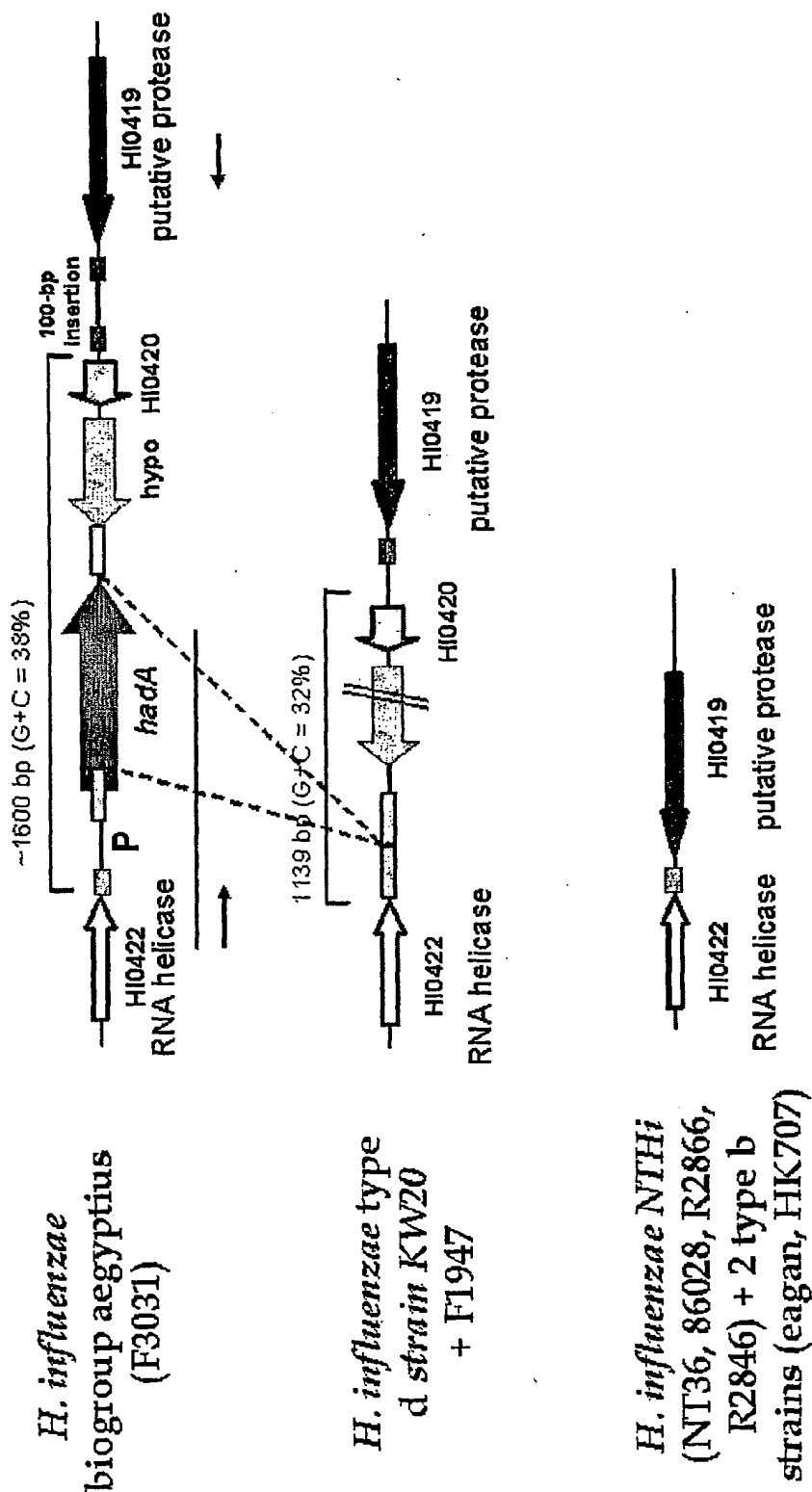
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**FIGURE 21****FIGURE 21A****FIGURE 21B**

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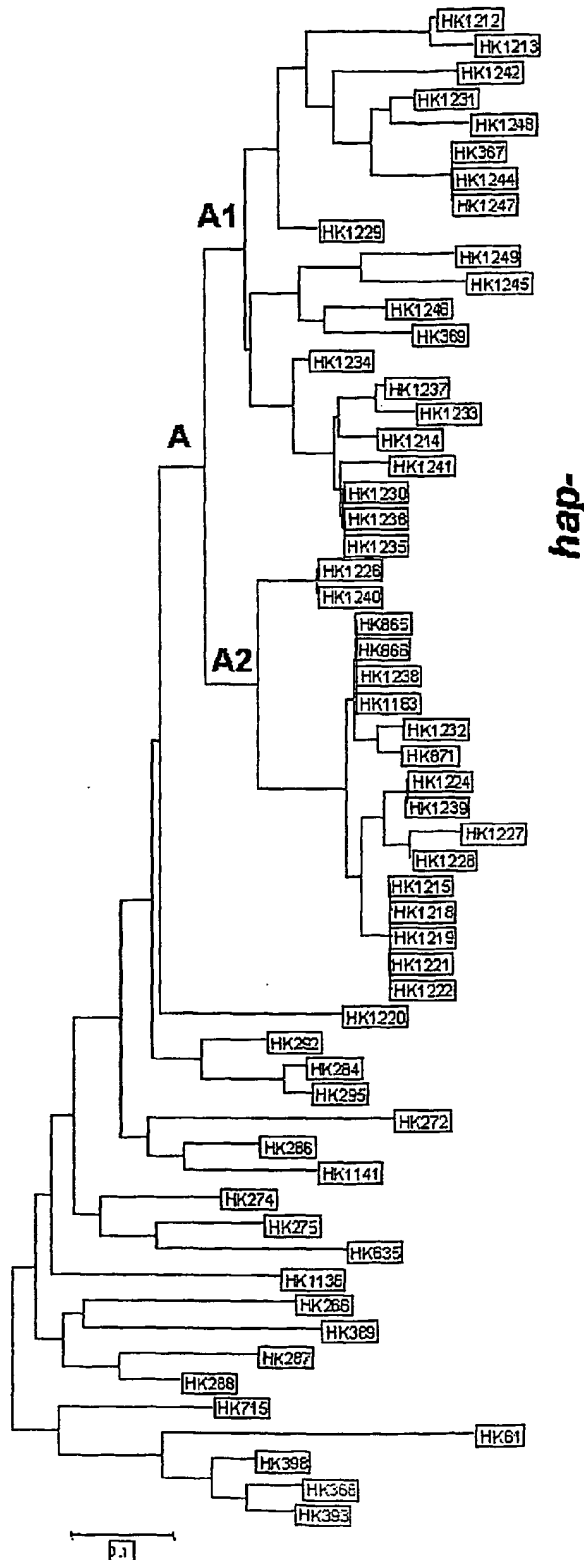
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FIGURE 22



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FIGURE 23

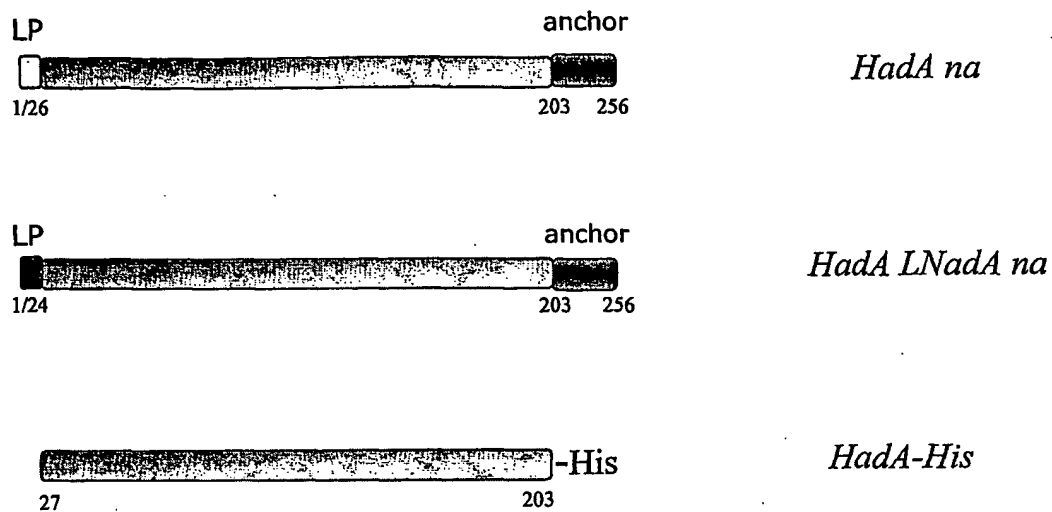


**hadA+**  
*H. influenzae* biogroup *aegyptius*  
(BPF clones)

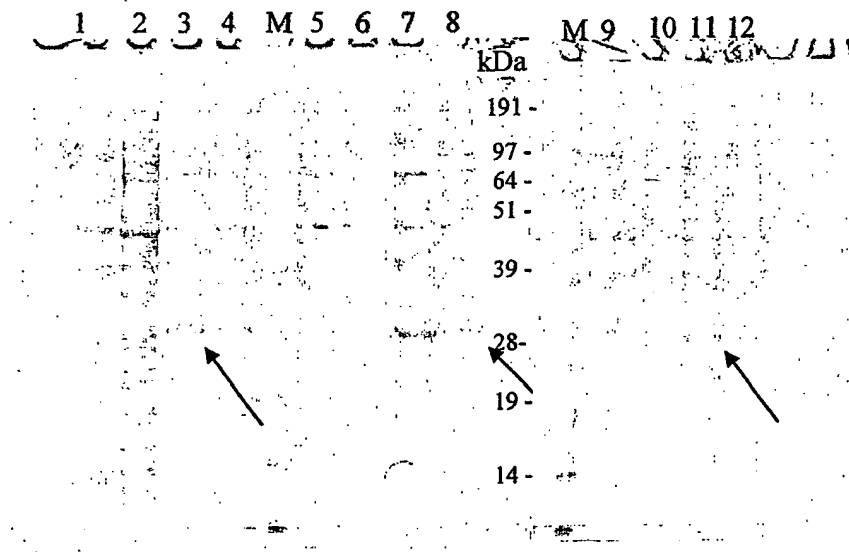
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**FIGURE 24**

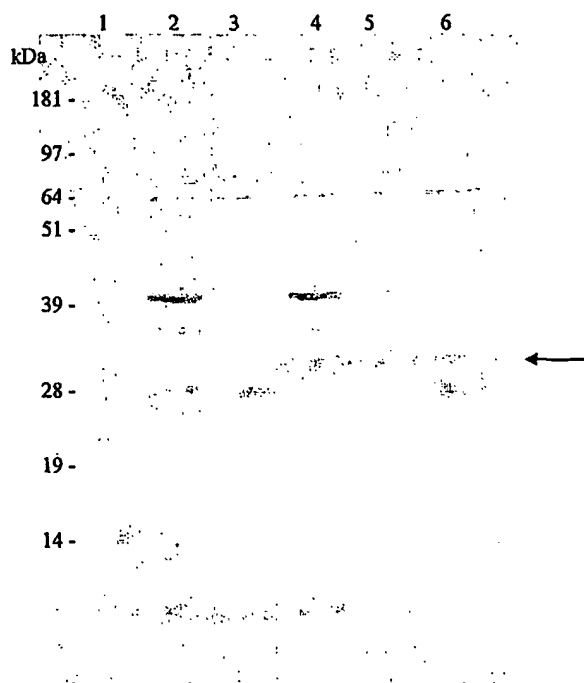


**FIGURE 25**



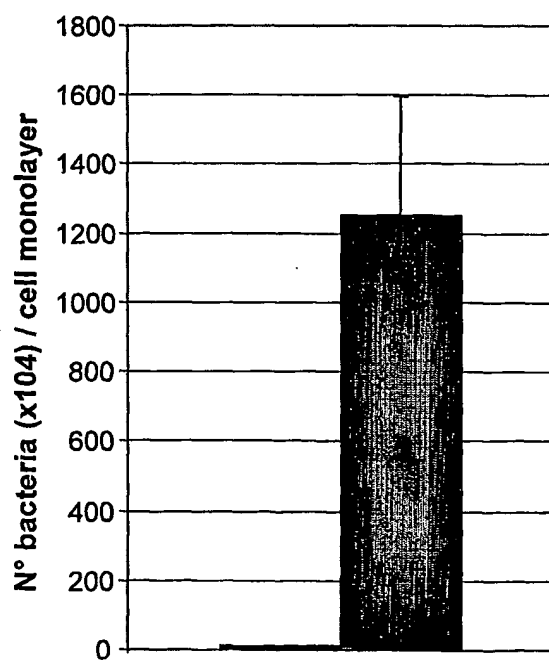
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**FIGURE 26**

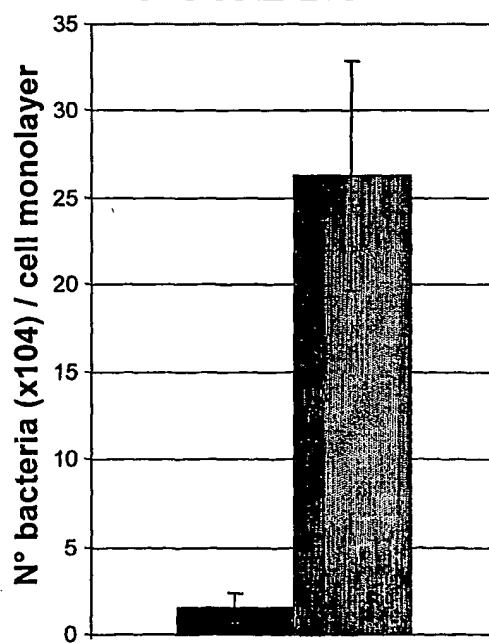


**FIGURE 29**

**FIGURE 29A**

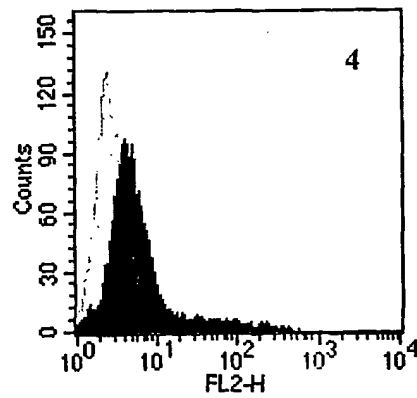
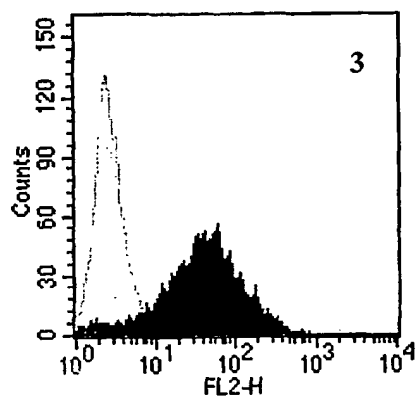
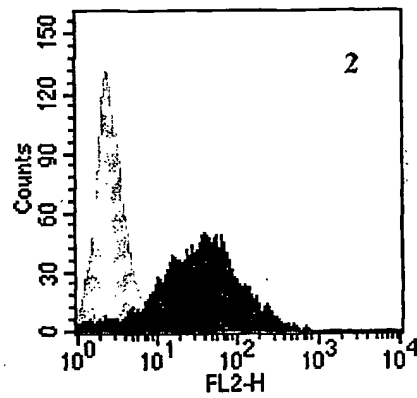
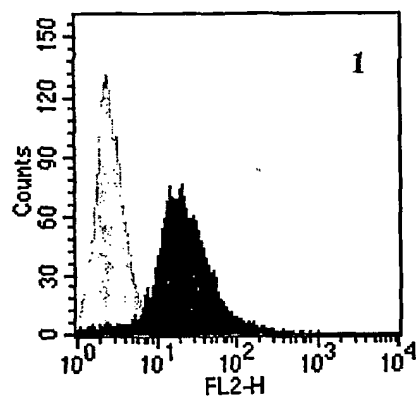
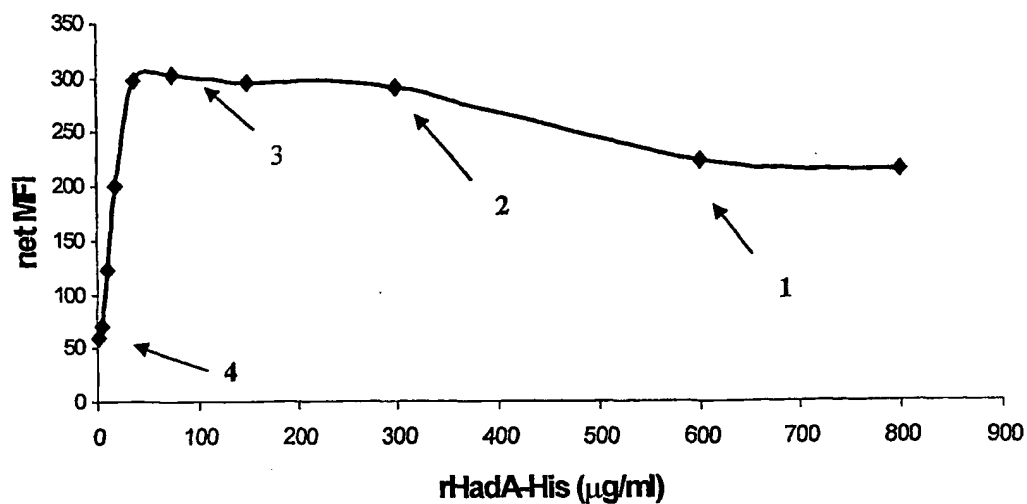


**FIGURE 29B**



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**FIGURE 27**



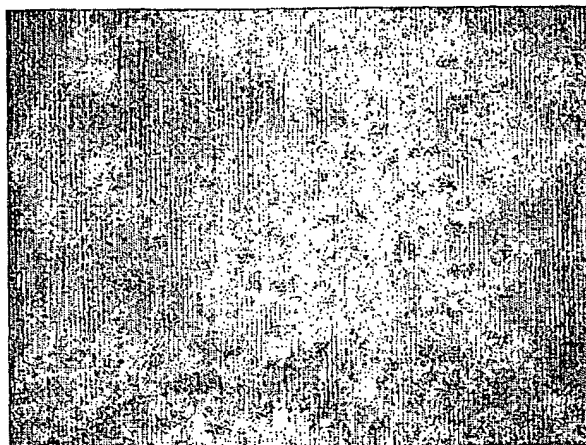
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**FIGURE 28**

**FIGURE 28A**



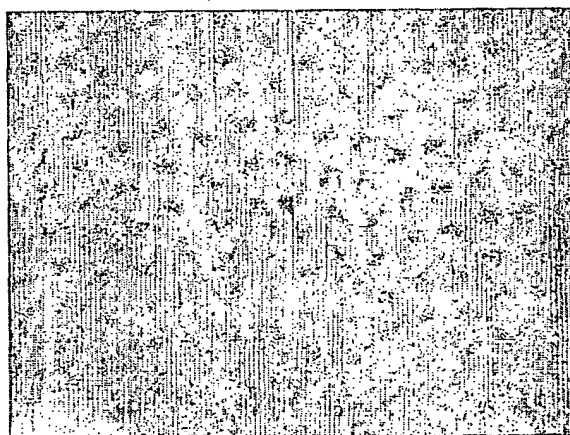
**FIGURE 28B**



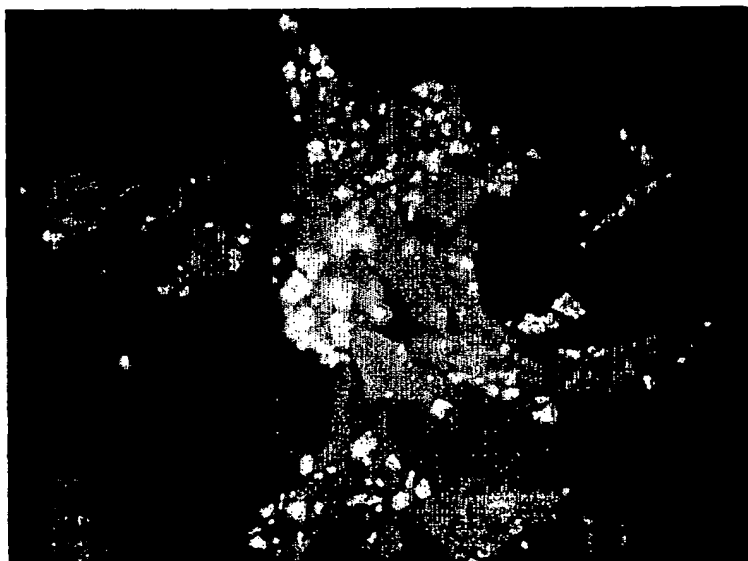
**FIGURE 28C**



**FIGURE 28D**

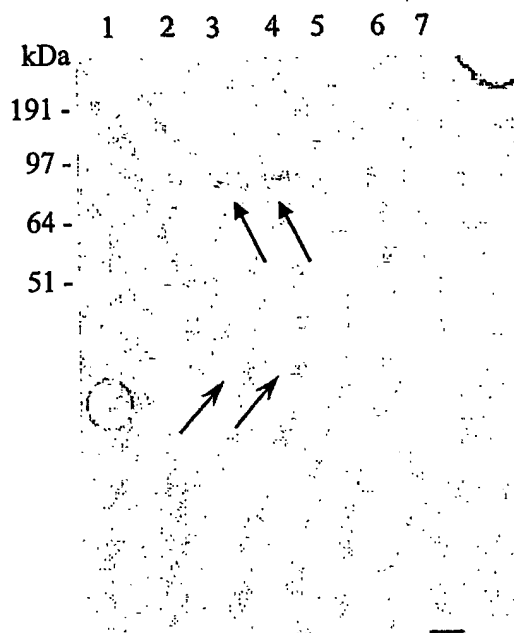
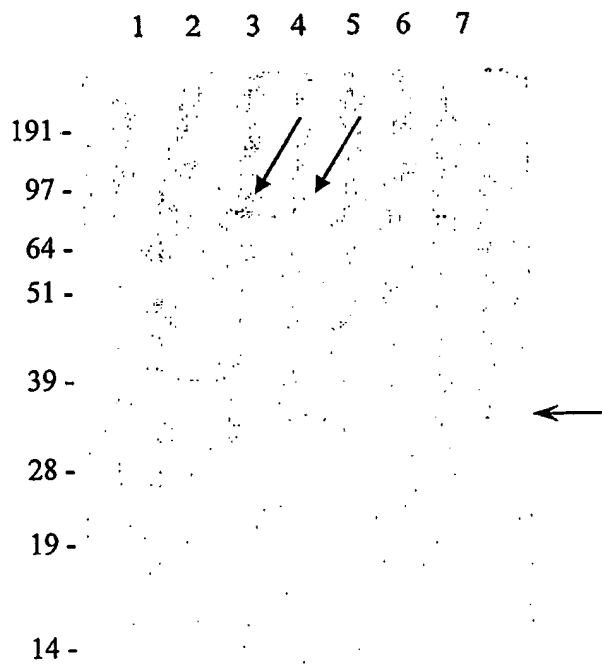


**FIGURE 30**



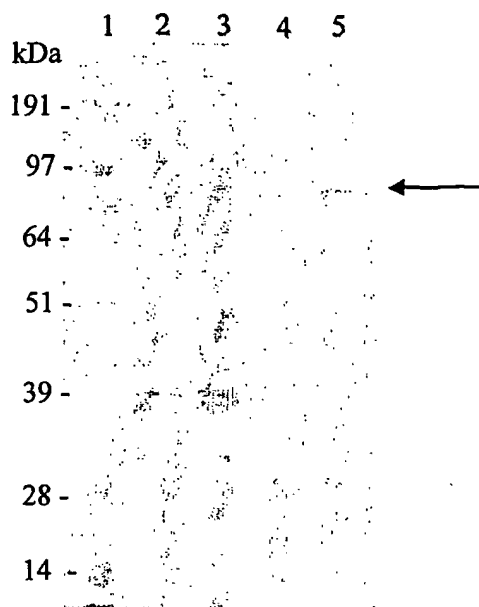
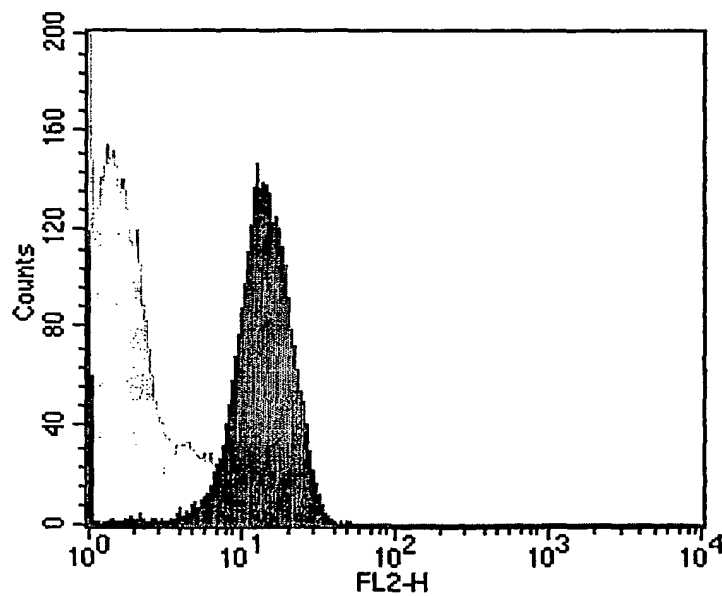
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**FIGURE 31****FIGURE 32**

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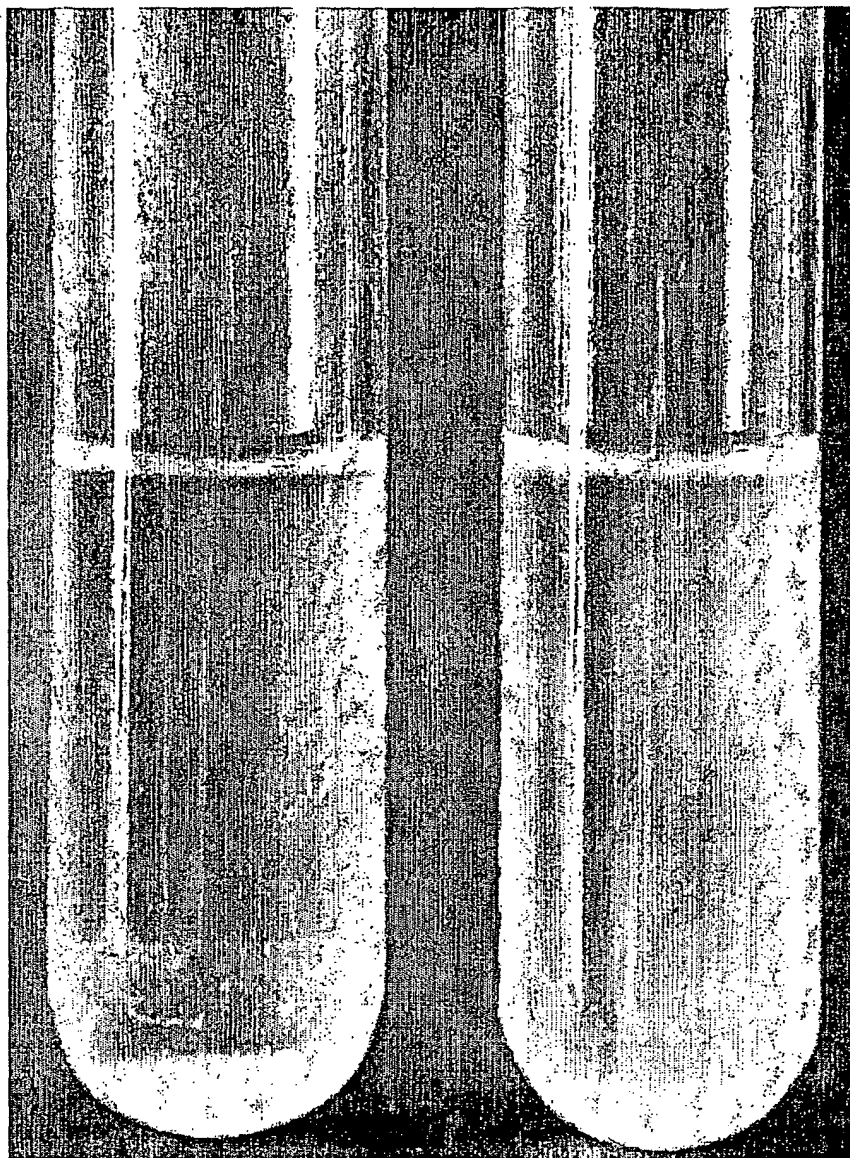
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**FIGURE 33****FIGURE 34**

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**FIGURE 35**



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**HadA<sup>-</sup>**

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